JVC

SERVICE MANUAL

MODEL JT-V31

STEREO TUNER

No. 2367
FEB 1976

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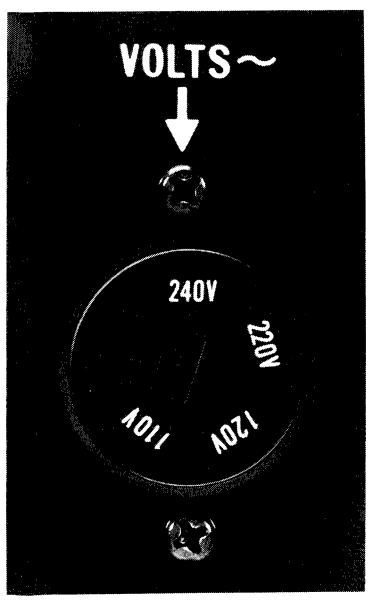


This SET is switchable between line voltages of 110, 220 and 240 volts AC, 50/60Hz.
The change-over switch is placed on the rear panel of the set.
To select another voltage, turn the change-over switch with a screwdriver or coin.

1. Specifications

FM Tuner Section

Tuning Range		:	88MHz – 108MHz
Usable Sensitivity		:	1.9μV
50dB S/N Sensitivity	Mono	:	4.0μV
	Stereo	:	40μV
Signal to Noise Ratio	Mono	:	72dB
	Stereo	:	50dB
Distortion at 1kHz		:	0.2% (Mono), 0.35% (Stereo)
at 10kHz		:	0.25% (Mono), 0.5% (Stereo)
at 100Hz		:	0.2% (Mono), 0.5% (Stereo)
Capture Ratio		:	1.2dB
Alternate Channel Selectivity		:	60dB
Image Response Ratio		:	60dB
IF Response Ratio		:	90dB
Spurious Response Ratio		:	80dB
AM Suppression Ratio		:	50dB
Stereo Separation at 1kHz		:	45dB
at 10kHz		:	35dB
at 100Hz		:	40dB
Subcarrier Product Ratio		:	50dB
SCA Rejection Ratio		:	70dB
Stereo Threshold Level		:	10μV
Muting Threshold Level		:	10μV (Mono and Stereo)
Frequency Response		:	30Hz – 15kHz +0.5dB -2.5dB
De-emphasis		:	75 or 50μsec.
Output Level (Re: 400Hz, 75kHz dev.)		:	750mV
Antenna Input Impedance		:	300Ω balanced 75Ω unbalanced

AM Tuner Section

Tuning Range	:	525kHz – 1605kHz
Usable Sensitivity	:	300μV/m (bar antenna) 50μV (ext. antenna)
Total Harmonic Distortion	:	0.5%
Signal to Noise Ratio	:	50dB
Selectivity	:	30dB
Image Rejection	:	45dB
IF Rejection	:	45dB
Output Level (Re: 400Hz, 100% mod.)	:	750mV
Antenna	:	Built-in ferrite core bar ant. and External antenna terminal
Power Source	:	AC 110/120/220/240V, 50/60Hz AC 120V, 60Hz (U.S.A.) AC 240V, 50Hz (U.K. and Australia)
Power Consumption	:	8.5 watts
Dimensions		
Height	:	6 inch (15.2cm)
Width	:	15-11/32 inch (39.0cm)
Depth	:	14-3/32 inch (35.8cm)
Weight	:	Net 11.0 lbs. (5.0kg) Gross 13.7 lbs. (6.2kg)

2. Removal of Top Cover and Bottom Plate

Procedure and Part Numbers

1. Remove 4 screws (Item No. 44) through the both sides of the top cover (Item No. 39).
2. Remove the top cover.
3. Remove 5 screws (Item No. 47) from bottom plate (Item No. 6) and remove the bottom plate from the chassis.

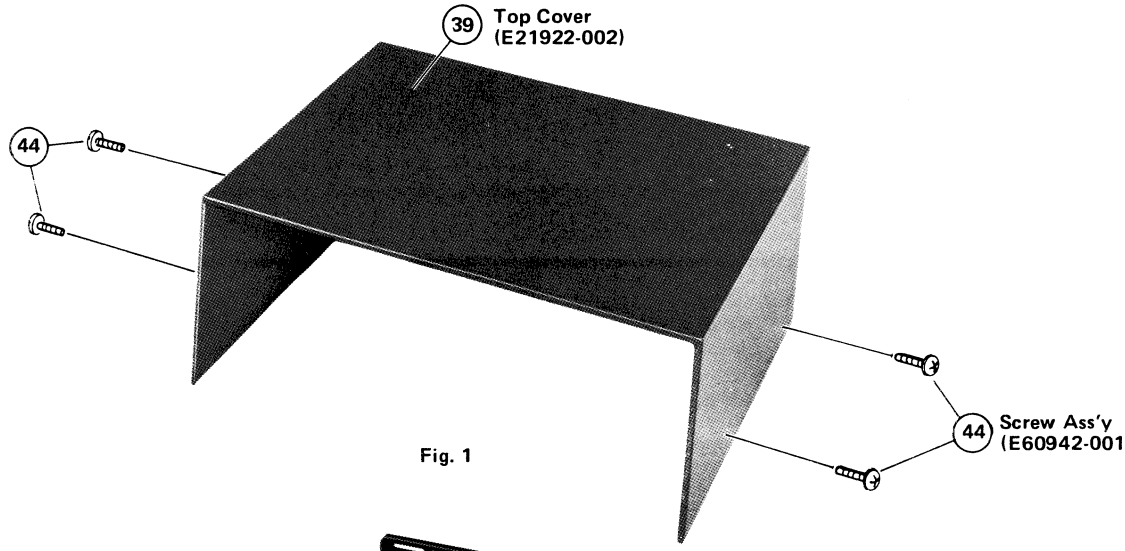


Fig. 1

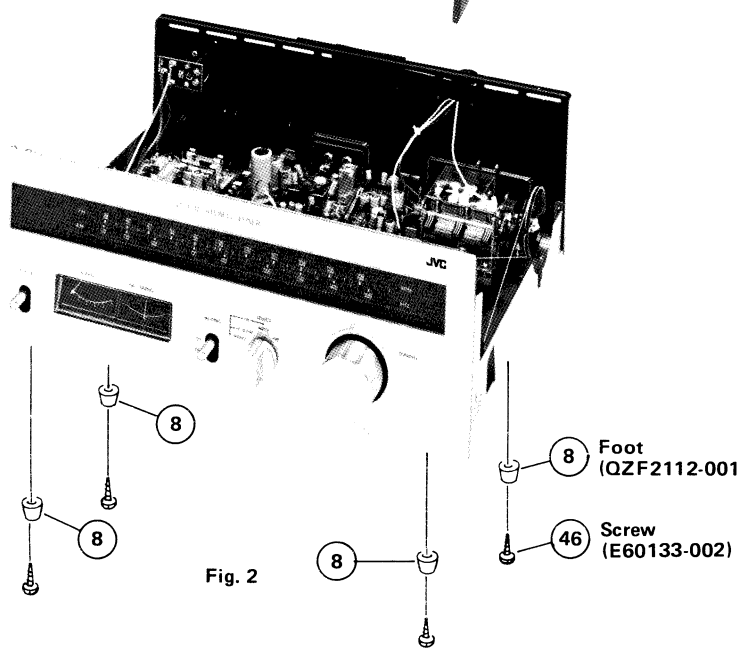


Fig. 2

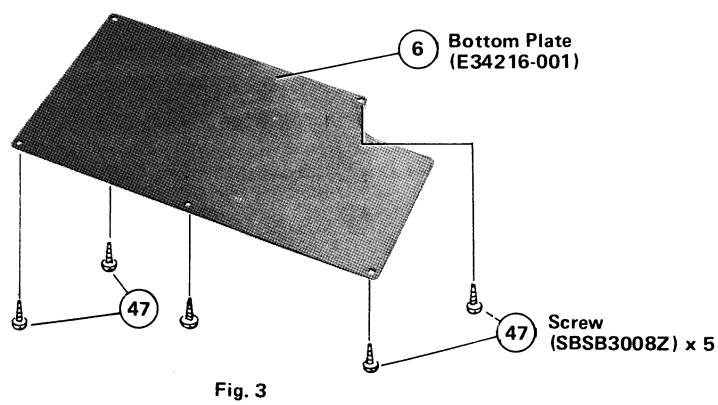
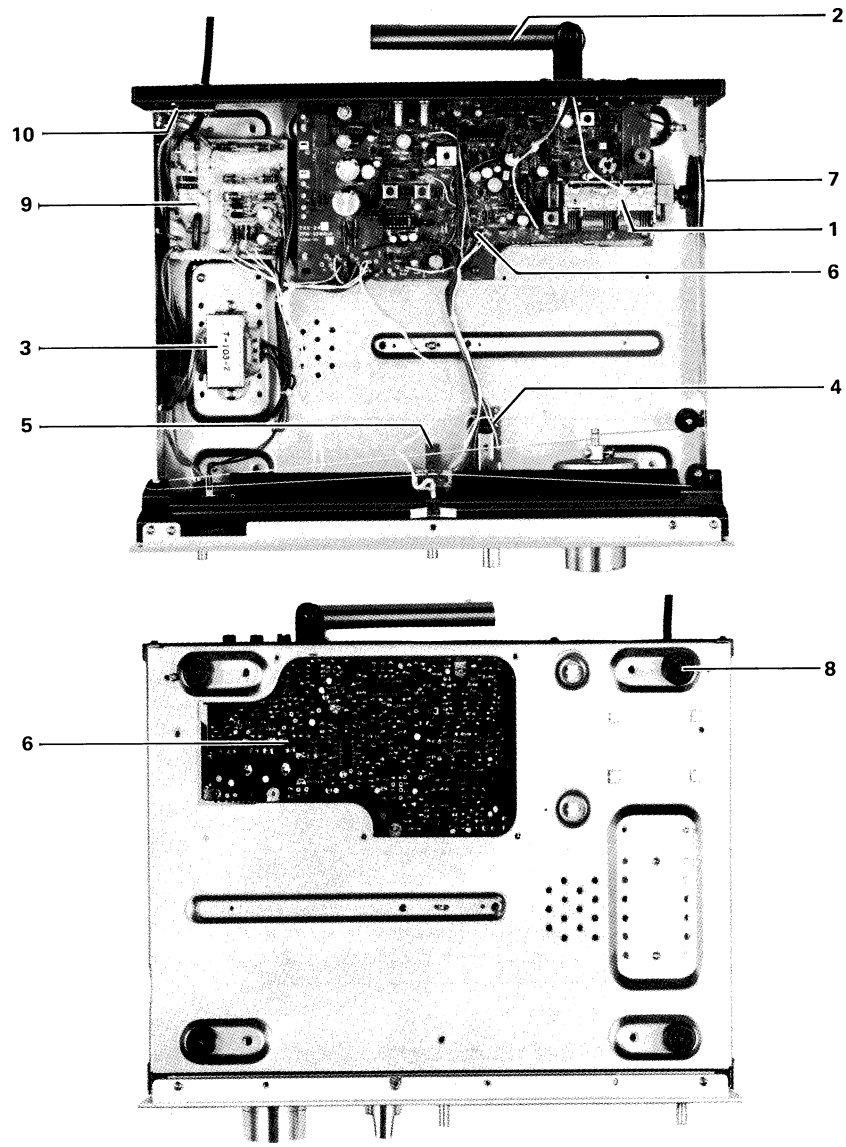


Fig. 3

3. Main Parts Location and Part Numbers



Parts List

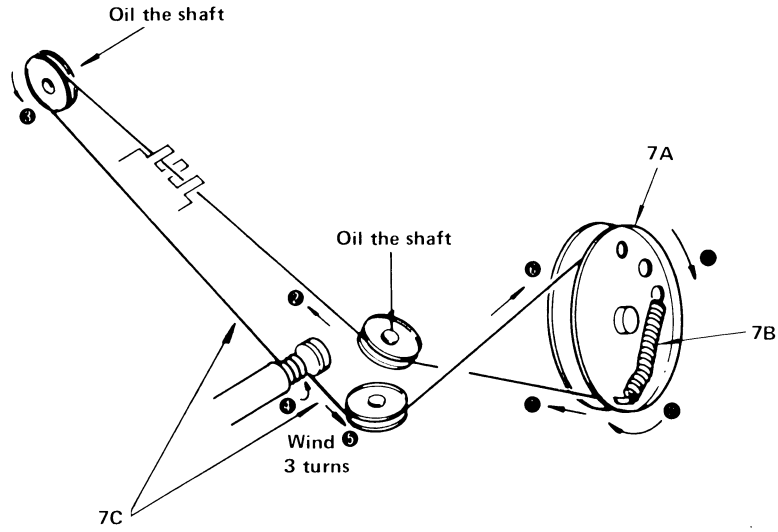
Item No.	Part Number	Rating	Description	Q'ty
1	QAA2234-001		Variable Capacitor	1
2	E03037-32UD		Bar Antenna Coil	1
* 3	E03042-15F		Power Transformer	1
4	TSC-54A		Select Switch C.B. Ass'y	1
	QSR6044-200		Slide Rotary Switch	1
5	TSC-55A		Muting Switch C.B. Ass'y	1
	QSL2212-003		Lever Switch	1
* 6	TFM324GUA1		Tuner C.B. Ass'y	1
7A	QZD1208-002		Dial Drum	1
7B	E49698-001		Spring	1
7C	E32757-017		Dial Rope	1
8	QZF2112-001		Foot	4
* 9	TPS-55A		Power C.B. Ass'y	1
*10	TSC-56A		Voltage Select C.B. Ass'y	1
42	E34216-001		Bottom Plate	1
47	SBSB3008Z		Screw	5

* Different in different areas. Refer to page 19.

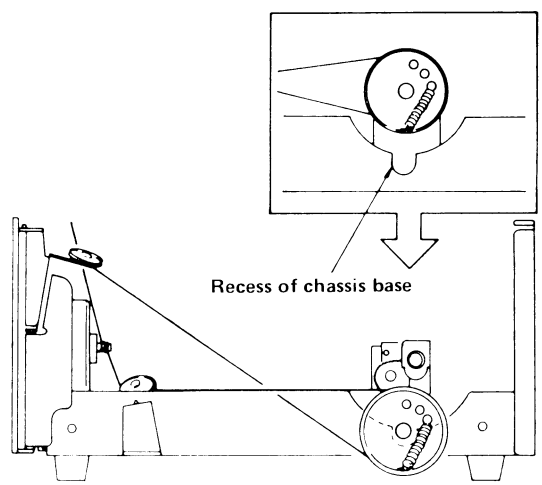
4. Dial Stringing and Tuning Knob Fitting Procedures

4-(1) Dial Stringing

Turn the tuning capacitor so that its plates are completely closed (maximum capacity) first. Then start dial stringing following the diagram below.

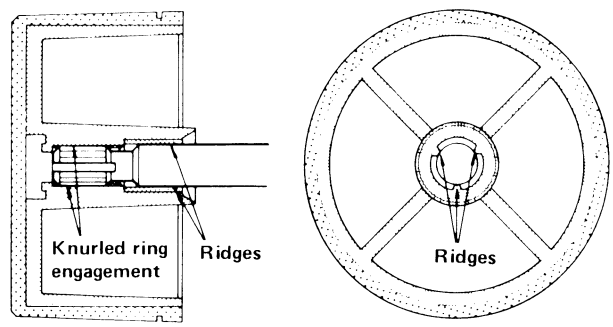


Note: When replacing the circuit boards, fix the dial drum in the recess of the chassis base so that the string will not come loose.



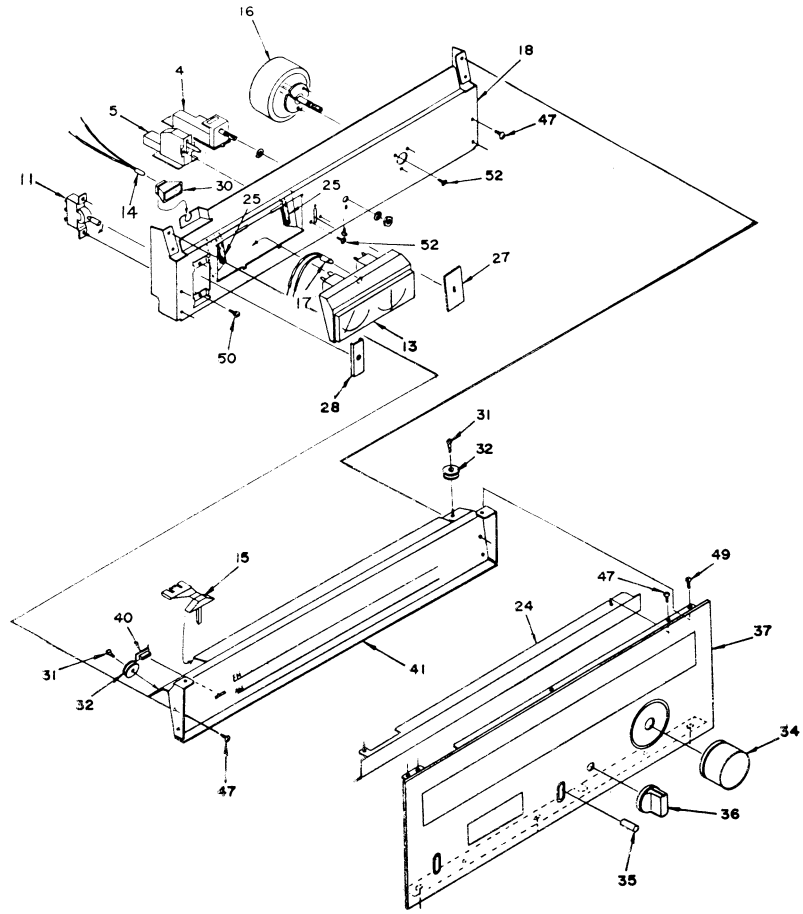
4-(2) Tuning Knob Fitting

The tuning knob used in this set is designed to have a reduced eccentricity. Torque transmission is through knurled ring engagement and the center of rotation is maintained by the three ridges clamping the shaft. To fit the tuning knob, first press in lightly by turning lightly to permit the ridges to fall into the recesses in the shaft. When you feel that the shaft and knob are completely engaged, press the knob straight in the direction of the axis of the shaft. Be careful not to injure the ridges by pressing the knob in forcibly, as this will increase the eccentricity of the knob.



5. Exploded View and Parts List

5-(1) Front Panel

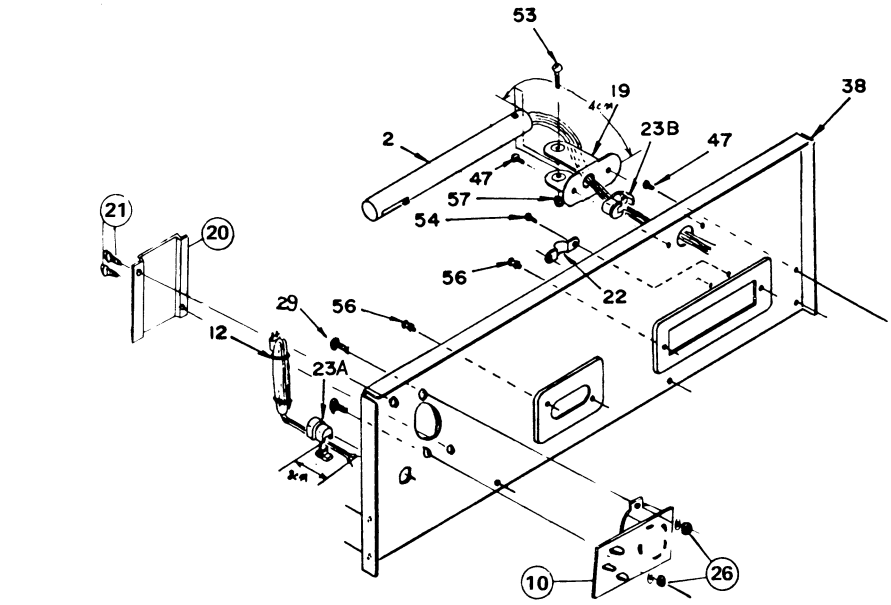


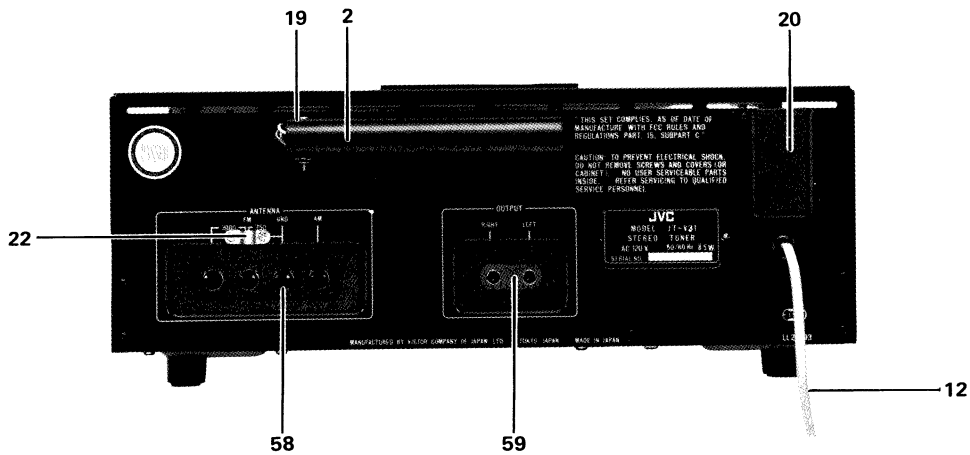
Parts List

Item No.	Part Number	Rating	Description	Q'ty
4	TSC-54A		Select Switch C.B. Ass'y	1
	QSR6044-200		Slide Rotary Switch	1
5	TSC-55A		Muting Switch C.B. Ass'y	1
	QSL2212-003		Lever Switch	1
*11	QSL1135-012		Power Switch	1
13	E03680-002		Meter	1
14	QLP3105-001		Lamp 6V/35mA	1
15	E34362-001		Needle Ass'y	1
16	E34138-002		Tuning Shaft Ass'y	1
17	E60166-001		Lamp 6V/100mA	1
18	E21903-001		Front Bracket	1
24	E34215-002		Reflector	1
25	E45204-013		Plate	2
27	E60482-001		Felt Spacer	1
28	E45979-008		"	1
30	E60580-001		Rubber Bushing	1
31	E49447-001		Shaft	3
32	E45017-001		Roller	3
34	E60317-001		Tuning Knob	1
35	E60319-001		Lever Knob	1
36	E60318-001		Select Knob	1
37	E21901-006		Front Panel Ass'y	1
40	E60313-001		Stereo Indicator	1
41	E21904-002		Dial Scale	1
47	SBSB3008M		Screw	11
49	SBSB3008C		"	5
50	LPSP3006ZS		"	2
52	SSSP3006NS		"	5

* Different in different areas. Refer to page 19.

5-(2) Rear Panel



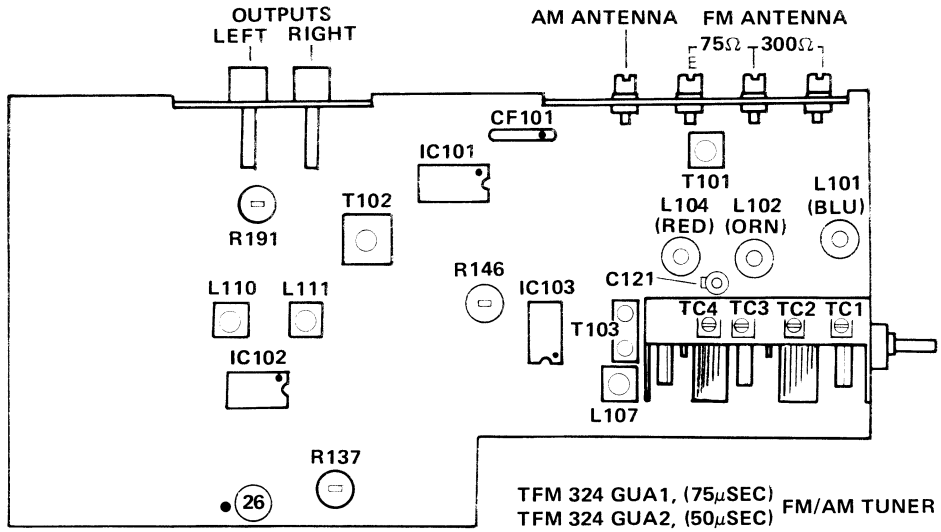


Parts List

Item No.	Part Number	Rating	Description	Q'ty
2	E03037-32UD		Bar Antenna Coil	1
10	TSC56A		Voltage Select C.B. Ass'y	1
*12	QMP1200-244		Power Cord	1
19	E49695-002		Bar Antenna Bracket	1
*20	E60931-001		Cover	1
*21	SBSB3008M		Screw	2
22	E49000-002		Wire Clamp	1
*23A	QHS3876-162		Cord Stopper	2
23B	QHS3876-162		Cord Stopper	1
26	NTB3000NS		Nut	2
29	SPSP3008MS		Screw	2
38	E21922-002		Rear Panel	1
47	SBSB3008M		Screw	6
53	SPSP3025NS		"	1
54	SPSX3014NS		"	2
56	E48729-001		Plastic Rivet	2
57	NNZ3000NS		Nut	1
58	E03572-007		Antenna Terminal	1
59	E03043-21B		Pin Jack	1

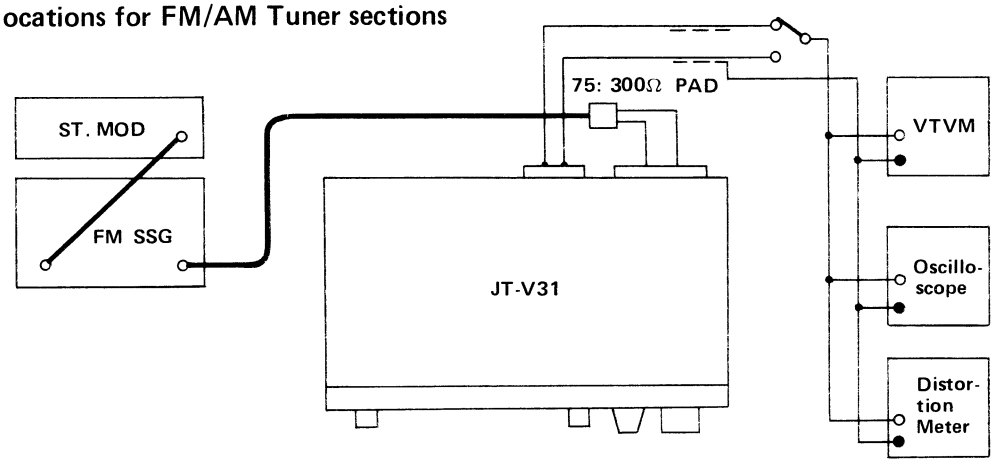
* Different in different areas. Refer to page 19.

6. FM/AM Tuner Alignment Procedure



6-(1) FM Section

Alignment locations for FM/AM Tuner sections



Discriminator, Center Meter & Distortion

1. Connect an RF generator, 1kHz modulation and 75kHz deviation, to the antenna terminals on the rear panel through a dummy antenna.
2. Connect an oscilloscope, distortion meter and VTVM to the OUTPUT Jacks on the rear panel.
3. Tune to a frequency where there is no broadcasting.
4. Adjust the bottom core of T102 so that the center meter indicates "0" (zero).
5. Set the generator to 98MHz.
6. Set the dial pointer to 98MHz.
7. Adjust the top core of T102 so that the distortion is minimized at a value less than 0.4%.

Tracking and Sensitivity

Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set the RF generator to 88MHz, a modulation of 1kHz and a deviation of 75kHz, to provide an input of 2μV.
3. Connect a VTVM and an oscilloscope to the OUTPUT Jacks on the rear panel.
4. Set the dial pointer to 88MHz.
5. Adjust three coils L104, L102 and L101 in the tuning gang to maximize the output.

High Frequency

6. Set the RF generator to 108MHz, a modulation of 1kHz and a deviation of 75kHz, to provide an input of 2μV.
7. Set the dial pointer to 108MHz.
8. Adjust the FM trimmers C121, TC3 and TC1 in the tuning gang to maximize the output.
9. Repeat these high and low frequency adjustments alternately until maximum sensitivity is obtained.

Muting Level

1. Connect a VTVM and an oscilloscope to the OUTPUT Jacks.
2. Set the RF generator to 108MHz, a modulation of 1kHz and a deviation of 75kHz, to provide an input of 10μV.
3. Turn R146 clockwise and remember the point at which the muting ceases operating.
4. Turn R146 counterclockwise slightly so that the output level drops by 1dB.
5. Attenuate the output of the RF generator to 2dB from 10μV of Step 2 and check that the muting is still operating.

Multiplex

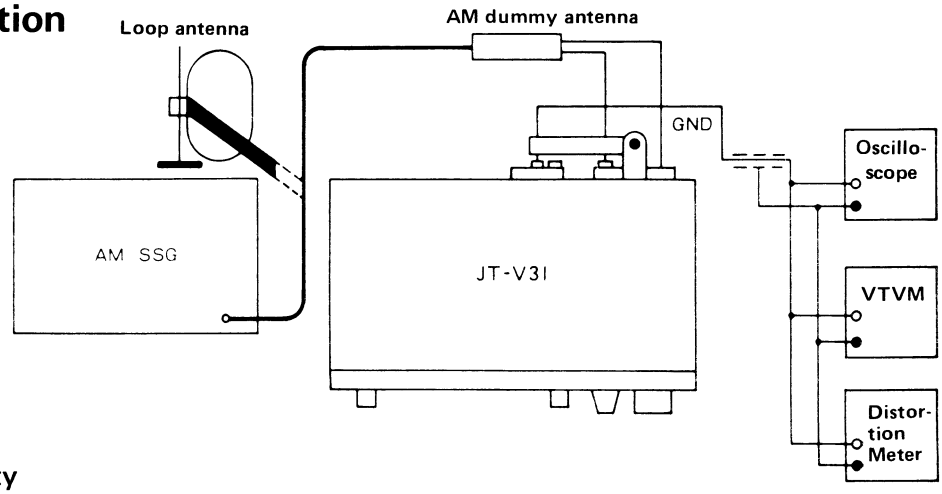
1. Set a stereo signal generator as follows: Modulation frequency 1,000Hz, Deviation pilot 7.5kHz, Main and Sub. 67.5kHz. Connect its output to an RF generator.
2. Connect the RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an oscilloscope and a distortion meter to the OUTPUT Jacks.
4. Set the RF generator to 98MHz and an output of 1mV.
5. Set the dial pointer to 98MHz.
6. Connect a frequency counter to Tab No. 26.
7. Switch off the pilot signal of the stereo modulator.
8. Adjust R137 so that the frequency counter indicates 19kHz (±0.1kHz).
9. If no frequency counter is available, there is another simplified method. Tune exactly to a stereo broadcast. Then turn R137 in either direction to find the range in which the stereo indicator lights up and fix R137 at the center of the range.

Stereo Separation

10. Switch the selector of the stereo modulator to left channel modulation.
11. Adjust R191 so that the output of the right channel is minimized.
12. Switch the selector of the modulator to right channel modulation.
13. Adjust R191 so that the output of the left channel is minimized.
14. Set R191 to average, if the separation of right and left are different.

Note: Keep the MODE selector switch at AUTO position during this adjustment procedure of stereo separation.

6-(2) AM Section



Tracking and Sensitivity

Low Frequency

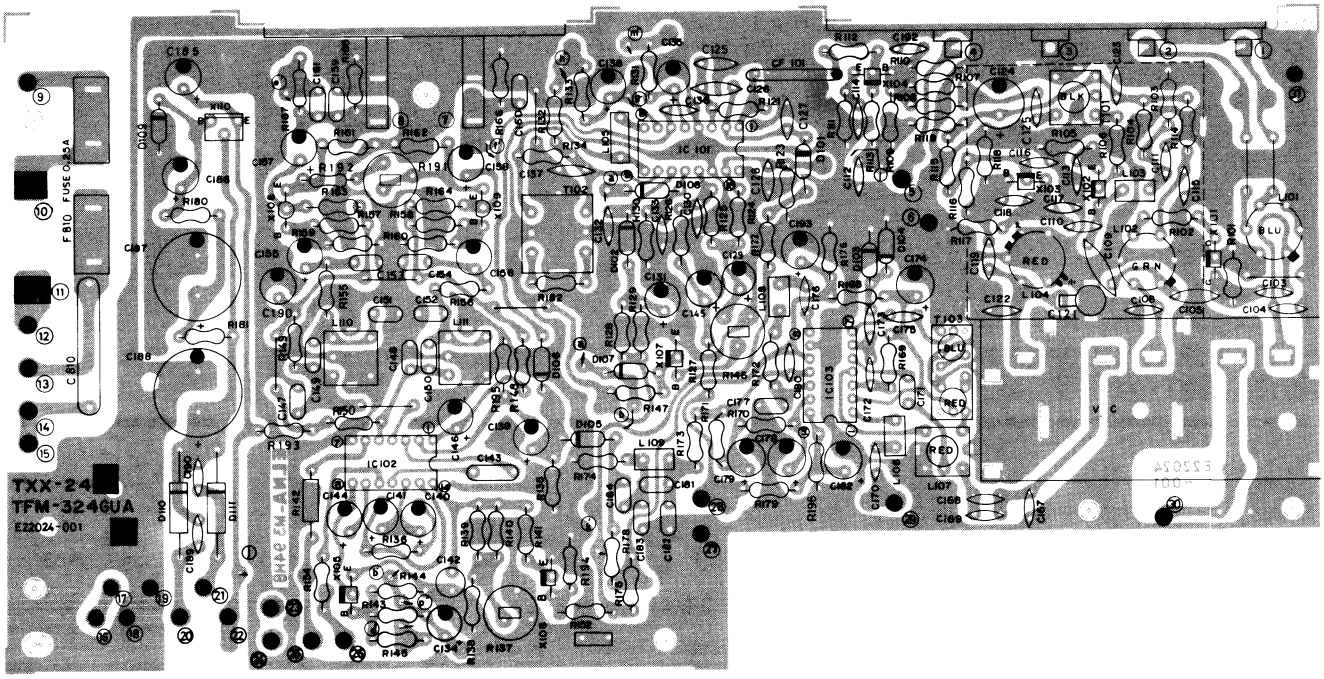
1. Connect an RF generator to the antenna terminals on the rear panel, set this to 600kHz with 30% modulation at 400Hz.
2. Connect an AC VTVM and an oscilloscope to OUTPUT Jacks on the rear panel.
3. Set the dial pointer to 600kHz.
4. Adjust Osc. transformer L107 and the ferrite bar antenna to maximize the output signal.

High Frequency

5. Set the RFgenerator to 1,400kHz with 30% modulation at 400Hz.
6. Set the dial pointer to 1,400kHz.
7. Adjust the trimmers TC4 and TC2 in the AM tuning gang so that the output signal is maximized.
8. Repeat these high and low frequency adjustments alternately until maximum sensitivity is obtained.

7. Circuit Board Ass'y and Parts List

7-(1) TFM-324GUA1 & 2 FM/AM Tuner C.B. Ass'y



Transistor Voltage (in Volts)

	G	S	D	
X101	0	0	8.2	
2SK55D				
	B	C	E	
X102	1.5	10.6	0.8	
2SC535B				
X103	4.5	7.9	3.9	
2SC1342C				
X104	2.7	10	2.1	
2SC461C				
X105	0.7	0	0	No Signal
2SC458C	0	2.3	0	1mV RF Input
X106	0	2.7	0	AUTO Position
2SC458C	0.7	0	0	AM Position
X108	1.4	7.2	0.86	
X109	1.4	7.2	0.86	
2SC1775AV(F)				
X110	12.4	25	11.8	
2SD325E				
X801	7.0	19	6	
2SD325E				

IC Voltages (in Volts)

Pin No.	IC101(V)		IC102(V)		IC103(V)
1	2.0	2.0	10.8	10.8	1.0
2	2.0	2.0	3.0	3.0	8.6
3	2.0	2.0	5.4	5.4	4.9
4	0	0	8.3	8.3	8.6
5	1.6	0	8.3	8.3	3.6
6	5.2	5.2	12.6	0.9	1.3
7	5.5	5.2	0	0	2.1
8	5.5	5.5	0	0	4.8
9	5.5	5.5	2.2	2.2	0
10	5.5	5.5	1.5	1.5	9.1
11	10.2	10.2	2.1	2.1	1.5
12	4.3	4.3	2.3	2.1	0.7
13	0	2.6	2.3	2.3	1.3
14	0	0	3.1	3.1	0
15	4.9	4.4			
16	0	0			
	○	( ) [ ]	○ ( )	[ ]	⊃ ( ) [ ]

NOTE:
○ INDICATES No Signal Input.
( ) INDICATES 1mV RF Input.
[ ] INDICATES 1mV RF Input in STEREO Mode.

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X101	2SK-55D	IDSS: 14mA, NF: 3.5dB (f=100MHz)		F.E.T.	Hitachi
X102	2SC535 (B, C)	100mW	700MHz	Silicon	"
X103	2SC1342 (B, C)	"	250MHz	"	"
X104	2SC461 (C)	200mW	230MHz	"	"
X105	2SC458 (C)	250mW	"	"	"
X106	2SC458 (C)	"	"	"	"
X107	2SC458 (C)	"	"	"	"
X108	2SC1775AV (F)	300mW	200MHz	"	"
X109	2SC1775AV (F)	"	"	"	"
X110	2SD325 (E)	10W	8MHz	"	Sanyo

Integrated Circuits

Item No.	Part Number	Rating	Description	Maker
IC101	HA1137W		FM IF Amp and DET	Hitachi
IC102	HA1156W		MPX	"
IC103	HA1151		AM RF IF	"

Diodes

Item No.	Part Number	Rating	Description	Maker
D101	1S2473		Silicon	Toyo Dengu
D102	1S2473		"	"
D103	1S2473		"	"
D104	1S2473		"	"
D105	1S2473		"	"
D106	1S2473		"	"
D107	1S2473		"	"
D108	1S2473		"	"
D109	E0771-12	500mW	Zener Diode 13V	JRC
D110	SiB01-02		Silicon	Kyodo Denki
D111	SiB01-02		"	"

Coils

Item No.	Part Number	Rating	Description	Maker
L101	E03477-024		RF Coil (Blue)	
L102	E03477-35		" (Orange)	
L103	E03522-2R2KY	2.2μH	Choke Coil	
L104	E03477-026		RF Coil (Red)	
L105	E03522-180J	18μH	Choke Coil	
L106	E03522-2R2KY	2.2μH	"	
L107	E03079-29		AM OSC Coil (Red)	
L108	E03522-391KY	390μH	Choke Coil	
L110	E03407-005	40mH	MPX Coil (Black)	
L111	E03407-005	"	" (")	
T101	E03078-39		FM IFT	
T102	E03134-020		FM DET Trans	
T103	E03613-002		AM IFT	

Capacitors

Item No.	Part Number	Rating		Description
	QAA2234-001			Variable Capacitor
C103	QCS11HJ-101	100pF	50V	Ceramic
C104	QCS11HJ-180	18pF	"	"
C106	QCF11HP-223	0.022μF	"	"
C108	QCS11HJ-180	18pF	"	"
C109	QCS11HJ-100	10pF	"	"
C110	QCS11HJ-4R0	4pF	"	"
C111	QCS11HJ-101	100pF	"	"
C112	QCF11HP-223	0.022μF	"	"
C113	QCF11HP-103	0.01μF	"	"
C114	QCF11HP-223	0.022μF	"	"
C115	QCF11HP-103	0.01μF	"	"
C116	QCF11HP-103	"	"	"
C117	QCT05CH-100	10pF	"	"
C118	QCT05CH-220	22pF	"	"
C119	QCT05CH-7R0	7pF	"	"
C121	QAT3001-005	10pF	"	Trimmer
C122	QCT05SH-220	22pF	"	Ceramic
C123	QCF11HP-103	0.01μF	"	"
C124	QEW41CA-107	100μF	16V	Electrolytic
C125	QCZ0107-473	0.047μF	25V	Ceramic
C126	QCZ0107-473	"	"	"
C127	QCF11HP-223	0.022μF	50V	"
C128	QCF11HP-223	"	"	"
C129	QEW41CA-476	47μF	16V	Electrolytic
C130	QCF11HP-223	0.022μF	50V	Ceramic
C131	QEW41CA-476	47μF	16V	Electrolytic
C132	QCF11HP-223	0.022μF	50V	Ceramic
C133	QCF11HP-223	"	"	"
C134	QEW41CA-106	10μF	16V	Electrolytic
C135	QEW41EA-475	4.7μF	25V	"
C136	QCS11HJ-820	82pF	50V	Ceramic
C137	QCF11HP-223	0.022μF	"	"
C138	QEW41HA-105	1μF	50V	Electrolytic
C139	QEW41EA-475	4.7μF	25V	"
C140	QEB41EM-106	10μF	"	L.L.C. Electrolytic
C141	QEB41HM-224	0.22μF	50V	"
C142	QFS42BJ-471	470pF	"	Polystyrene
C143	QFM41HK-473	0.047μF	"	Mylar
C144	QEB41HM-105	1μF	"	L.L.C. Electrolytic
C145	QEW41HA-474	0.47μF	"	Electrolytic
C146	QEW41CA-106	10μF	16V	"
C147	QFM41HJ-103	0.01μF	50V	Mylar
C148	QFM41HJ-103	"	"	"
C149	QFM41HJ-182	1800pF	"	"
C150	QFM41HJ-182	"	"	"
C151	QFM41HK-102	1000pF	"	"
C152	QFM41HK-102	"	"	"
C153	QFM41HK-272	2700pF	"	"
C154	QFM41HK-272	"	"	"
C155	QEB41HM-224	0.22μF	"	L.L.C. Electrolytic
C156	QEB41HM-224	"	"	"
C157	QEW41HA-474	0.47μF	"	Electrolytic
C158	QEW41HA-474	"	"	"
C159	QFM41HK-122	1200pF	"	Mylar
C160	QFM41HK-122	1200pF	50V	Mylar
C161	QFM41HK-102	1000pF	"	"
C162	QEW41AA-107	100μF	10V	Electrolytic

Capacitors

Item No.	Part Number	Rating		Description
C167	QCS11HJ-150	15pF	50V	Ceramic
C168	QCS11HJ-331	330pF	"	"
C170	QCF11HP-223	0.022μF	"	"
C171	QFM41HK-103	0.01μF	"	Mylar
C172	QCF11HP-223	0.022μF	"	Ceramic
C173	QCF11HP-223	"	"	"
C174	QEW41CA-476	47μF	16V	Electrolytic
C175	QCF11HP-223	0.022μF	50V	Ceramic
C176	QCS11HJ-331	330pF	"	"
C177	QFM41HK-102	1000pF	"	Mylar
C178	QEW41HA-105	1μF	"	Electrolytic
C179	QEW41EA-475	4.7μF	25V	"
C180	QCF11HP-223	0.022μF	50V	Ceramic
C182	QFM41HK-272	2700pF	"	Mylar
C184	QFM41HK-333	0.033μF	"	"
C185	QEW41CA-107	100μF	16V	Electrolytic
C186	QEW41CA-107	"	"	"
C187	QEW41EA-477	470μF	25V	"
C188	QEW41VA-108	1000μF	35V	"
C189	QCF11HP-103	0.01μF	50V	Ceramic
C190	QCF11HP-103	"	"	"
C192	QCS11HJ-470	47pF	"	"
C193	QEW41CA-227	220μF	16V	Electrolytic
C194	QEW41CA-227	"	"	"

Resistors

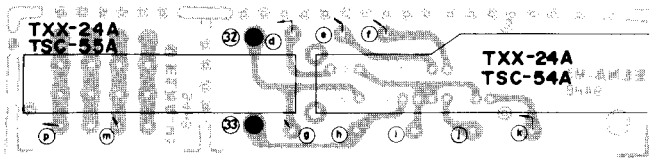
Item No.	Part Number	Rating		Description
R101	QRD181J-105	1MΩ	1/8W	Carbon
R102	QRD181J-470	47Ω	"	"
R103	QRD181J-472	4.7kΩ	"	"
R104	QRD181J-223	22kΩ	"	"
R105	QRD181J-102	1kΩ	"	"
R106	QRD181J-101	100Ω	"	"
R107	QRD181J-221	220Ω	"	"
R108	QRD181J-122	1.2kΩ	"	"
R109	QRD181J-153	15kΩ	"	"
R110	QRD181J-472	4.7kΩ	"	"
R111	QRD181J-102	1kΩ	"	"
R112	QRD181J-271	270Ω	"	"
R113	QRD181J-331	330Ω	"	"
R114	QRD181J-101	100Ω	"	"
R115	QRD181J-561	560Ω	"	"
R116	QRD181J-103	10kΩ	"	"
R117	QRD181J-222	2.2kΩ	"	"
R118	QRD181J-103	10kΩ	"	"
R119	QRD181J-121	120Ω	"	"
R121	QRD181J-331	330Ω	"	"
R122	QRD181J-334	330kΩ	"	"
R123	QRD181J-104	100kΩ	"	"
R124	QRD181J-104	"	"	"
R125	QRD181J-103	10kΩ	"	"
R126	QRD181J-153	15kΩ	"	"
R127	QRD181J-562	5.6kΩ	"	"
R128	QRD181J-121	120Ω	"	"
R129	QRD181J-121	"	"	"
R130	QRD181J-473	47kΩ	"	"
R131	QRD181J-123	12kΩ	"	"

Resistors

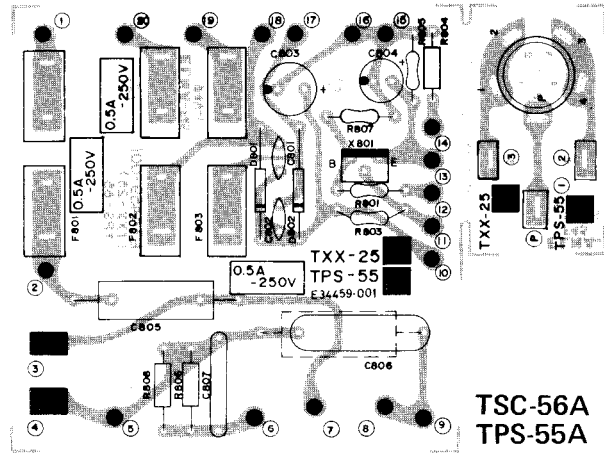
Item No.	Part Number	Rating		Description
R132	QRD181J-822	8.2kΩ	1/8W	Carbon
R133	QRD181J-220	220Ω	"	"
R134	QRD181J-562	5.6kΩ	"	"
R136	QRD181J-102	1kΩ	"	"
R137	QVP4A0B-472	4.7kΩ		Variable
R138	QRD181J-153	15kΩ	1/8W	Carbon
R139	QRD181J-183	18kΩ	"	"
R140	QRD181J-394	390kΩ	"	"
R141	QRD181J-332	3.3kΩ	"	"
R142	QRD126J-221	220Ω	1/2W	UNF. C. RES.
R143	QRD181J-473	47kΩ	1/8W	Carbon
R145	QRD181J-104	100kΩ	"	"
R146	QVP4A0B-473	47kΩ		Variable
R147	QRD181J-123	12kΩ	1/8W	Carbon
R148	QRD181J-121	120Ω	"	"
R149	QRD181J-562	5.6kΩ	"	"
R150	QRD181J-562	"	"	"
R152	QRD181J-104	100kΩ	"	"
R154	QRD181J-105	1MΩ	"	"
R155	QRD181J-472	4.7kΩ	"	"
R156	QRD181J-472	"	"	"
R157	QRD181J-474	470kΩ	"	"
R158	QRD181J-474	"	"	"
R159	QRD181J-683	68kΩ	"	"
R160	QRD181J-683	"	"	"
R161	QRD181J-222	2.2kΩ	"	"
R162	QRD181J-222	"	"	"
R163	QRD181J-123	12kΩ	"	"
R164	QRD181J-123	"	"	"
R165	QRD181J-683	68kΩ	"	"
R166	QRD181J-683	"	"	"
R167	QRD181J-105	1MΩ	"	"
R168	QRD181J-151	150Ω	"	"
R169	QRD181J-472	4.7kΩ	"	"
R170	QRD181J-562	5.6kΩ	"	"
R171	QRD181J-153	15kΩ	"	"
R172	QRD181J-331	330Ω	"	"
R173	QRD181J-153	15kΩ	"	"
R175	QRD181J-221	220Ω	"	"
R176	QRD181J-222	2.2kΩ	"	"
R178	QRD181J-473	47kΩ	"	"
R179	QRD181J-222	2.2kΩ	"	"
R180	QRD181J-122	1.2kΩ	"	"
R181	QRD181J-102	1kΩ	"	"
R191	QVP4A0B-473	47kΩ		Variable
R192	QRD181J-333	33kΩ	1/8W	Carbon
R193	QRD126J-100	10Ω	1/2W	UNF. C. RES.
R194	QRD181J-473	47kΩ	1/8W	Carbon

Others

Item No.	Part Number	Rating	Description
	E34460-001		Shield Plate
	E03572-007		Antenna Terminal
	E03043-21B		Pin Jack
CF101	E03609-001		Ceramic Filter



TSC54A/55A



TSC-56A
TPS-55A

7-(2) TSC-54A/55A Switch C.B. Ass'y

Others

Item No.	Part Number	Rating	Description	Maker
S3	QSR2212-003		Lever Switch	
S2	QSR6044-200		Slide Switch	

7-(3) TPS-55A Power Supply C.B. Ass'y & TSC56A Voltage Select Switch C.B. Ass'y

Transistor

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X801	2SD325 (E)	10W	8MHz	Silicon	Sanyo

Diodes

Item No.	Part Number	Rating	Description	Maker
D801	SiB01-02		Silicon	Kyodo Denki
D802	SiB01-02		"	"

Capacitors

Item No.	Part Number	Rating		Description	
C801	QCF11HP-103	0.01μF	50V	Ceramic	
C802	QCF11HP-103	"	"	"	
C803	QEW41VA-107	100μF	35V	Electrolytic	
C804	QEW41AA-107	"	10V	"	
*C805	QFH53AM-103	0.01μF	1000V	Metallized Mylar	

Resistors

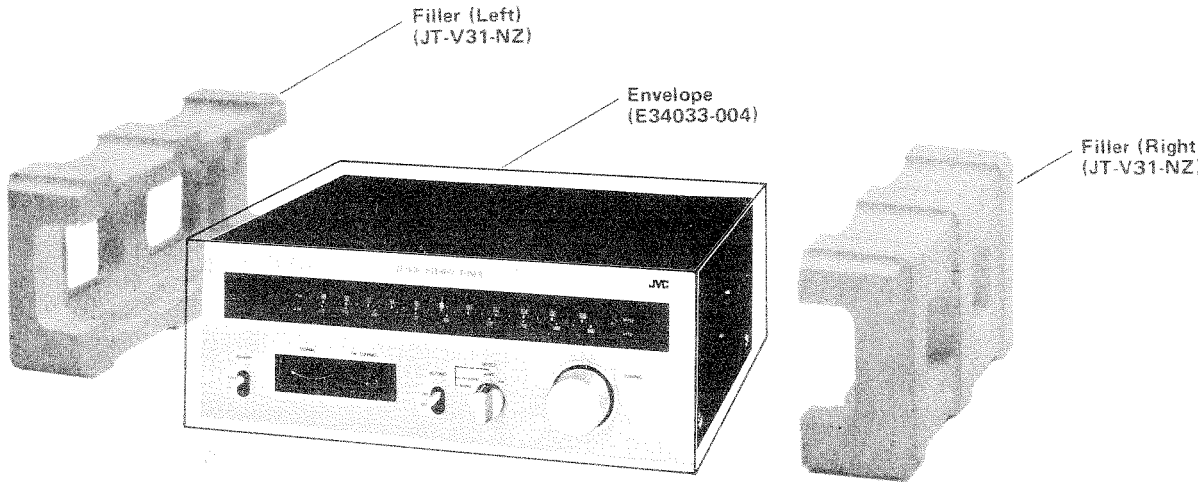
Item No.	Part Number	Rating		Description	
R801	QRD141J-182	1.8kΩ	1/4W	Carbon	
R803	QRD141J-332	3.3kΩ	"	"	
R804	QRD126J-100	10Ω	1/2W	UNF. Carbon	
R805	QRD141J-332	3.3kΩ	1/4W	Carbon	
*R806	QRC121K-475E	4.7MΩ	1/2W	Composition	
R807	QRD141J-272	2.7kΩ	1/4W	Carbon	
*R808	QRC121K-475E	4.7MΩ	1/2W	Composition	

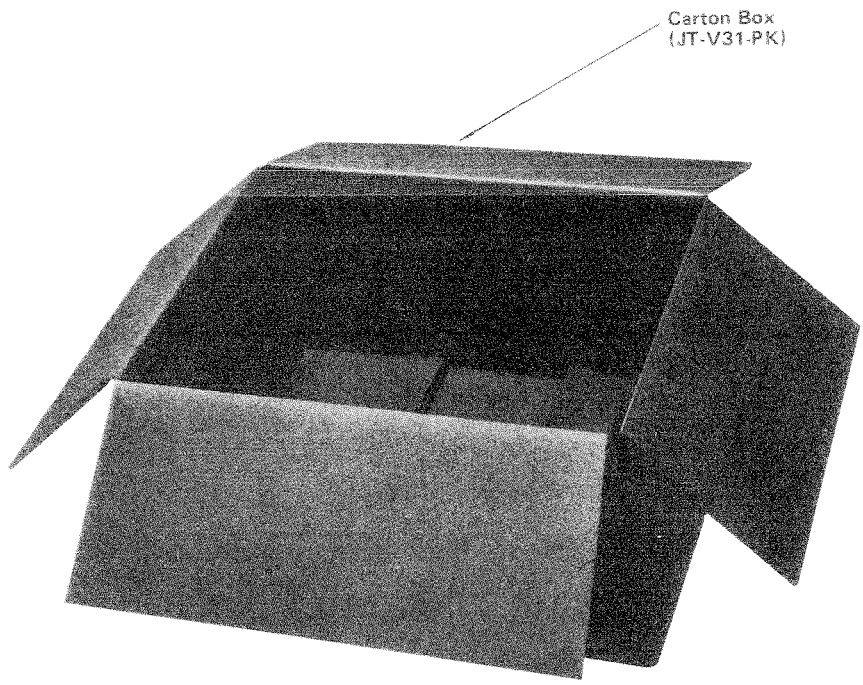
Others

Item No.	Part Number	Rating		Description	
*F801	QMF61U2-R30	0.3A	250V	Fuse (Primary)	
*F802	QMF61U2-R50	0.5A	"	Fuse (Secondary)	
*F803	QMF61U2-R50	"	"	Fuse (")	
S901	QSR0074-001	2A	250V	Line Voltage Selector	

*Different in different areas. Refer to page 19.

8. Packing Materials List



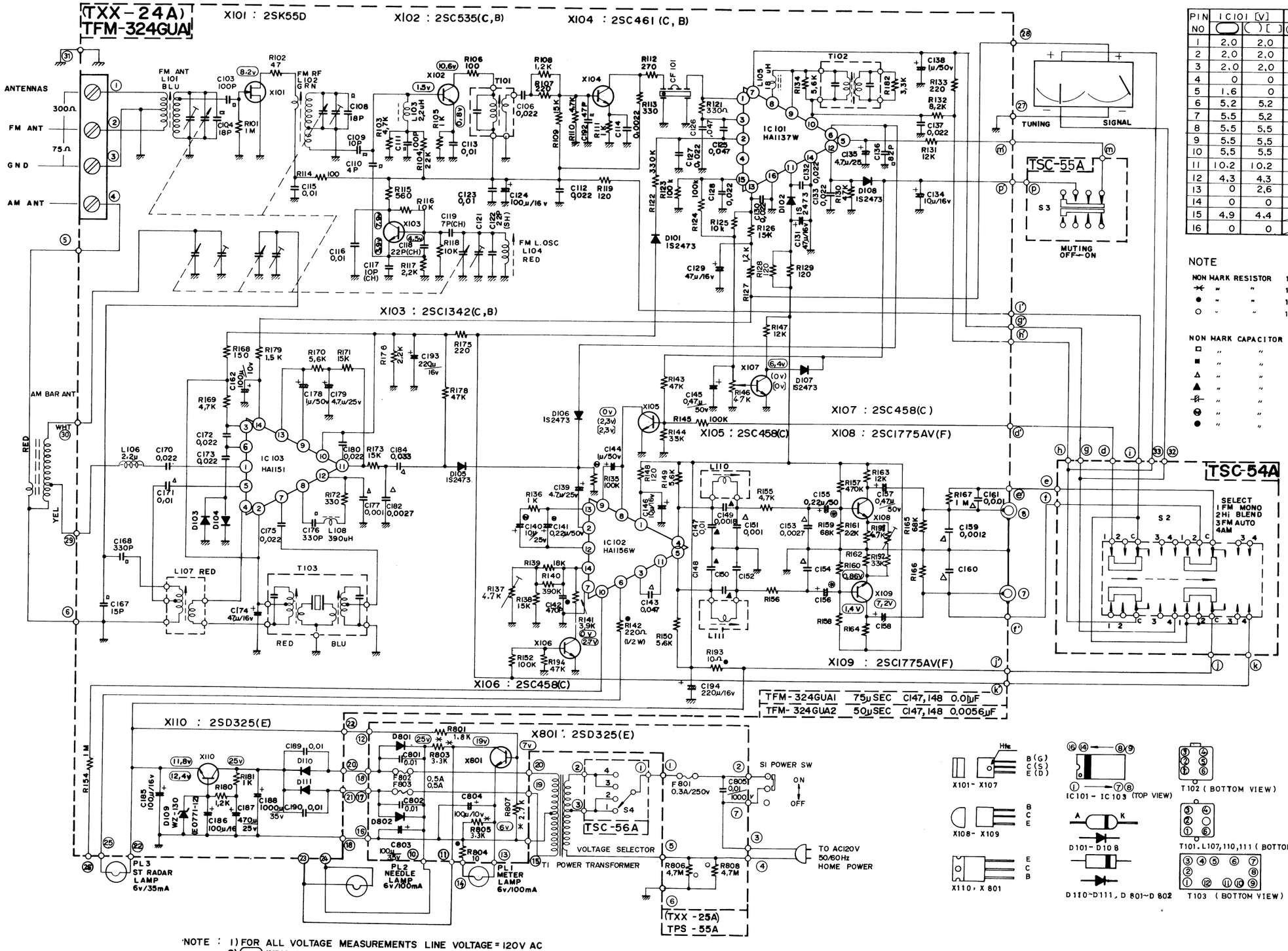


9. Accessories List

Part Number	Description	Q'ty
*E30580-508A	Instruction Book	1
E64207-002	Envelope	1
*BT20020	Warranty Card	1
E03614-002	FM Antenna	1
E03479-001	Signal Cord	1

*Different in different areas. Refer to page 19.

10. Schematic Diagram



PIN NO	IC101 [V]		IC102 [V]		IC103 [V]
	( )	[ ]	( )	[ ]	( ) [ ]
1	2.0	2.0	10.8	10.8	1.0
2	2.0	2.0	3.0	3.0	8.6
3	2.0	2.0	5.4	5.4	4.9
4	0	0	8.3	8.3	8.6
5	1.6	0	8.3	8.3	3.6
6	5.2	5.2	12.6	0.9	1.3
7	5.5	5.2	0	0	2.1
8	5.5	5.5	0	0	4.8
9	5.5	5.5	2.2	2.2	0
10	5.5	5.5	1.5	1.5	9.1
11	10.2	10.2	2.1	2.1	1.5
12	4.3	4.3	2.3	2.3	0.7
13	0	2.6	2.3	2.3	1.3
14	0	0	3.1	3.1	0
15	4.9	4.4			
16	0	0			

NOTE

NON MARK RESISTOR		1/6 W CARBON (J)
⊣	" "	1/4 W " "
●	" "	1/2 W UNFLAMABLE (J)
○	" "	1/2 W COMPOSITION (K)

NON MARK CAPACITOR	50V	CERAMIC (YZ)
□	" "	50V " (SL)(J)
■	" "	25V
△	" "	50V MYLAR (K)
▲	" "	50V (J)
⊣	" "	E CAPACITOR (A)
⊖	" "	E CAPA. LLC (M)
●	" "	POLYSTYROL (J)

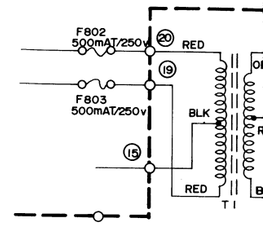
X101 ~ X107
B(G) C(S) E(D)
X108 ~ X109
B C E
X110 , X 801
E C B
IC101 ~ IC 103 (TOP VIEW)
D101 ~ D108
D110~D111 , D 801~D 802
T102 (BOTTOM VIEW)
T101, L107, 110, 111 (BOTTOM VIEW)
T103 (BOTTOM VIEW)

NOTE : 1) FOR ALL VOLTAGE MEASUREMENTS LINE VOLTAGE = 120V AC
2) ⬭ INDICATES DC VOLTAGE MEASURED WITH DC VTVM TO CHASSIS WITH NO SIGNAL INPUT (MUTING ON)
3) ( ) INDICATES DC VOLTAGE WITH 1mV RF INPUT
4) [ ] INDICATES DC VOLTAGE WITH 1mV RF INPUT 75KHz DEVIATION IN STEREO MODE

The schematic d
The primary cir
the diagram for
schematic diagra

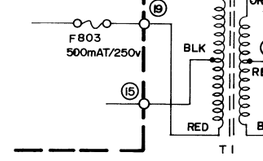
JT-V31(A)(B)
PRIMARY CIRCIT
DEEMPHASIS :

(TXX-25B)
TPS-55B



JT-V31(E) E
PRIMARY CIRCI
DEEMPHASIS

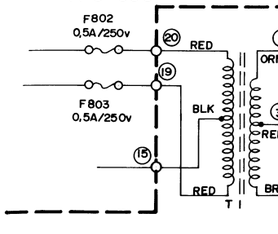
(TXX-25B)
TPS-55B

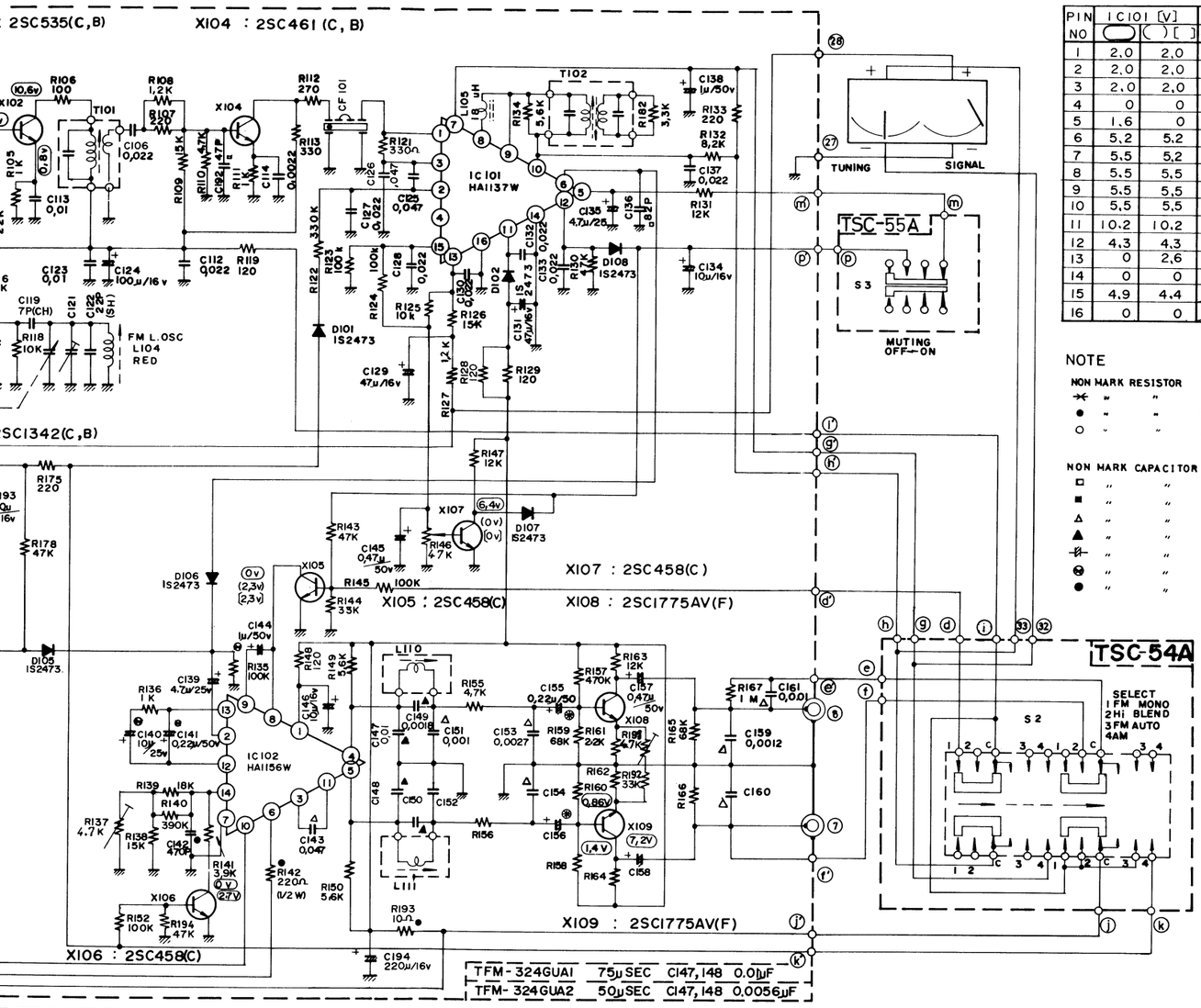


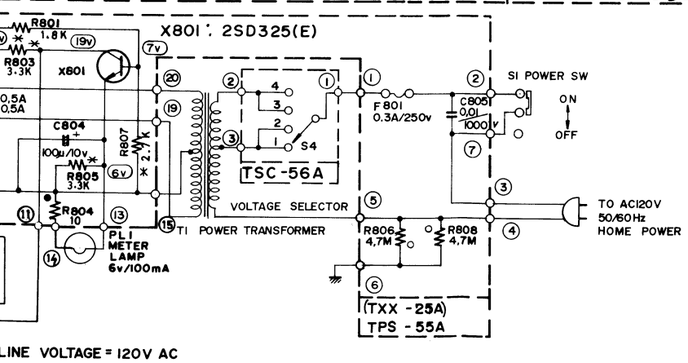
JT-V31 (U)	Fo
JT-V31 (F)	Fo
JT-V31 (P)	Fo

CATION
VOLTAGE SELEC
FOR THE PROP

(TXX-25C)
TPS-55C





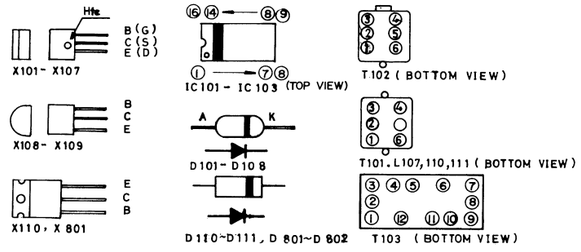


PIN NO	IC101 [V]		IC102 [V]		IC103 [V]
1	2.0	2.0	10.8	10.8	1.0
2	2.0	2.0	3.0	3.0	8.6
3	2.0	2.0	5.4	5.4	4.9
4	0	0	8.3	8.3	8.6
5	1.6	0	8.3	8.3	3.6
6	5.2	5.2	12.6	0.9	1.3
7	5.5	5.2	0	0	2.1
8	5.5	5.5	0	0	4.8
9	5.5	5.5	2.2	2.2	0
10	5.5	5.5	1.5	1.5	9.1
11	10.2	10.2	2.1	2.1	1.5
12	4.3	4.3	2.3	2.3	0.7
13	0	2.6	2.3	2.3	1.3
14	0	0	3.1	3.1	0
15	4.9	4.4			
16	0	0			

NOTE

NON MARK RESISTOR	1/6 W CARBON (J)
✕ " "	1/4 W " "
● " "	1/2 W UNFLAMABLE (J)
○ " "	1/2 W COMPOSITION (K)

NON MARK CAPACITOR	50V	CERAMIC (YZ)
□ " "	50V	" (SL)(J)
■ " "	25V	
△ " "	50V	MYLAR (K)
▲ " "	50V	(J)
⊬ " "	E CAPACITOR	(A)
⊖ " "	E CAPA. LLC	(H)
● " "	POLYSTYROL	(J)

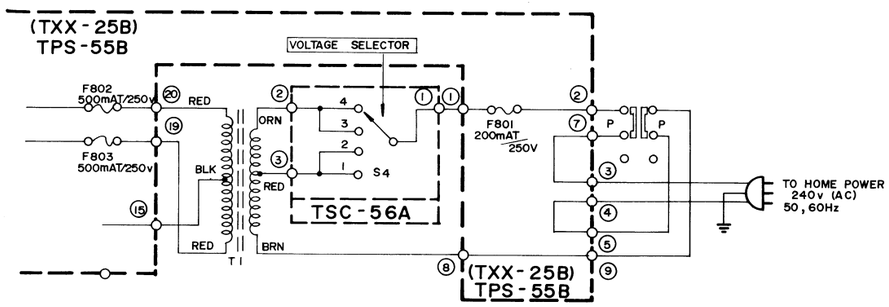


LINE VOLTAGE = 120V AC
SURED WITH DC VTVM TO CHASSIS
ON)
1 1mV RF INPUT
4 1mV RF INPUT 75KHz DEVIATION IN STEREO MODE

The schematic diagram shown left is for the U.S.A. and Canada. The primary circuit and deemphasis circuit are different from the diagram for other areas, therefore please use the proper schematic diagram shown below.

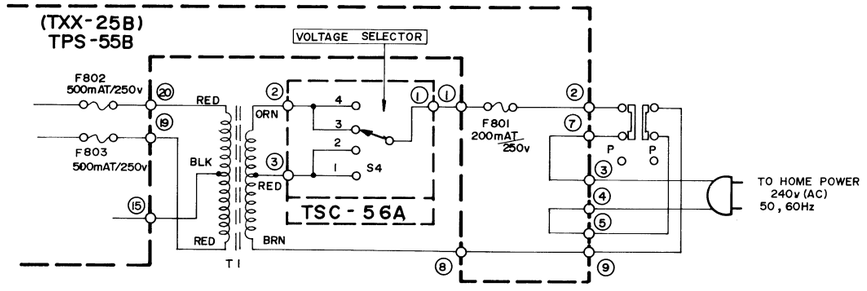
JT-V31(A)(B) For AUSTRALIA and United Kingdom.

PRIMARY CIRCIT (240V 50Hz ~)
DEEMPHASIS : USE 50μSEC (TFM-324GUA2)



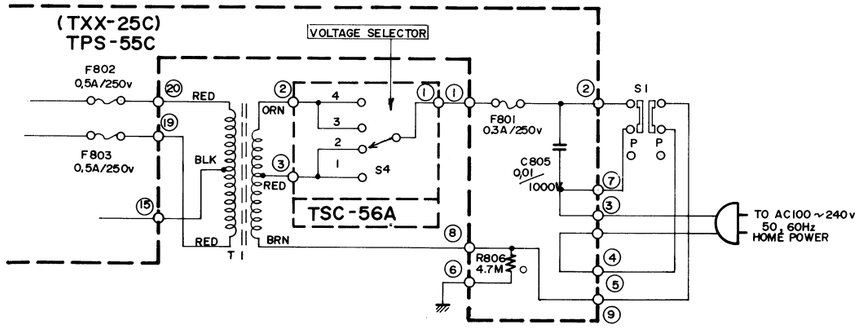
JT-V31(E) EUROPE (semko, sev)

PRIMARY CIRCIT (220V 50Hz ~)
DEEMPHASIS : USE 50μSEC (TFM-3246UA2)



JT-V31 (U)	For the universal use	75μ sec. (TFM-324GUA1)
JT-V31 (F)	For the universal use	50μ sec. (TFM-324GUA2)
JT-V31 (P)	For PACEX and NEX use	75μ sec.(TFM-324GUA1)

CATION
VOLTAGE SELECTOR (S4 MOUNTED ON THE REAR PANEL) MUST BE ADJUSTED FOR THE PROPER VOLTAGE OF HOME POWER.



11. Parts List with Specified Numbers for Designated Areas

Page	Item No.	Description	Original U.S.A. and Canada	For Europe Sweden Norway Finland Switzerland and Denmark	For U.K. and Australia	For Other Countries and PACEX
4	3	Power Transformer	E03042-15F	E03042-15E	E03042-15E	E03042-15E
4	6	Tuner C.B. Ass'y	TFM324GUA1 (75μsec)	TFM324GUA2 (50μsec)	TFM324GUA2	TFM324GUA2 (Other) TFM324GUA1 (PACEX)
4	9	Power C.B. Ass'y	TPS-55A	TPS-55B	TPS-55B	TPS-55C
15	C805	Metallized Mylar	QFH53AM-103			QFH53AM-103
15	R806	Composition	QRC121K-475E			QRC121K-475E
15	R808	Composition	QRC121K-475E			
15	F801	Fuse (Primary)	QMF61U2-R30	QMF51A2-R20	QMF51A2-R20	QMF61U2-R30
15	F802	Fuse (Secondary)	QMF61U2-R50	QMF51A2-R50	QMF51A2-R50	QMF61U2-R50
15	F803	Fuse (Secondary)	QMF61U2-R50	QMF51A2-R50	QMF51A2-R50	QMF61U2-R50
4	10	Voltage Select C.B. Ass'y	To set 120V	To set 220V	To set 240V	To set 110, 120, 220, 240V each proper voltage
7	20	Cover (for TSC-56A)	E60931-001		E60391-001	
7	21	Screw	SBSB3008M		SBSB3008M	
7	12	Power Cord	QMP1200-244	QMP3910-244	QMP9017-007 (U.K.) E03551-002 (Australia)	QMP1200-244
6	11	Power Switch	QSL1135-012	QSL2235-103	QSL2235-103	QSL2235-103
16		Instruction Book	E30580-508A	E30580-508A	E30580-508A	E30580-508A
16		Warranty Card	BT20020 (U.S.A.) BT20008 (Canada)		BT20013 (U.K.)	BT20014 (PACEX only)
10	23A	Cord Stopper	QHS3876-162	QHS3876-162	QHS3876-162 (U.K.) QHS6374-162 (Australia)	QHS3876-162